997294

27APR 25X1

[redacted]

[redacted]

18 April 1967
552 - OD-327

25X1 [redacted]
Post Office Box 9474
Rosslyn Station
Arlington, Virginia 22209

25X1 Subject: [redacted] Progress Report
March 1967 - Projects 552 and 552A

Gentlemen:

Enclosed are three (3) copies of [redacted] 25X1
Progress Report on Projects 552 and 552 A for the period March 1967.

Very truly yours,

[redacted] 25X1

Executive Vice President

LHB/aw
Enc. (3) P.R.

Cert. #855574

DECLASS REVIEW by NGA

[redacted]

[redacted]

14 April 1967
552-552A-OD-325

PROGRESS REPORT - 552 and 552A

For March 1967

552 #101

Rebuilt laser supplies and head were shipped and installed. A field trip made March 13 and 14 suceeded only in installing lasers as a system circuit fault prevented successful operation. Also, during this trip, higher voltage transistors were installed in digimotor circuits, but another circuit fault prevented completion of this job. A technician will be at customer's facility early in April to correct both problems and optical checkout of lasers will follow that.

552A #102

We are awaiting action on proposal to repair system.

552A #103

System apparently working well, but will need an optical check-up after equipment is moved to its operational site.

552A #104

Further refinements of film drive were completed on system, notably in power assist load sensors. A more positive mechanical nulling arrangement and friction and electrical damping were added to improve smoothness of start-off in "power assist" mode.

Mechanical alignments were also refined to improve "manual" mode of operation. "Full Power" mode appears to work reliably although film guides have to be carefully adjusted so not to overburden drive motors and increase scratching of film. Development work on drive will continue into April, although a successful conclusion will be made very soon.

Balance of work to complete system is to check, adjust, and debug all machine functions as all assembly work is complete.

Customer made a system checkout on 3/20/67 with results of this visit are attached. Action was taken to correct all objections with completion due early in April for customer inspection.

Enclosures:
1) Customer visit note
2) Financial Report

WWB:lms

14 April 1967

CUSTOMER REVIEW - 552A #104

1. Missing support and striking of lower objective cover by lens turret.

2. Odd sound RH turret indexing mechanism.

3. No Right Y axis scanning motion, left channel Y axis.

4. No movement any objective lens combination "slow motor".

5. Center holddown 1/4 turn screw struck by lower RH power range field lens.

6. High intensity light source RH not centered with odd shape spot.

7. X-left coordinate counter not functioning
Y-Right coordinate does not increase counts.

8. Interference unit right center holddown and rear center film guide

9. 75% left and right attenuator strikes image enhancer belt or pulley.

10. LH outer tailstock very tight.

10 March 1967
552-552A-OD-322

PROGRESS REPORT - 552 and 552A

for February 1967

552 #101

Laser power supplies were modified to incorporate mercury displacement relays as the improved high voltage safety interruptors replaced capacitor bank dumping relays with plug-in units with greater current capacity, and replaced and remounted damaged charge current limiting resistors. Units were thoroughly checked before leaving factory and proved to be quite reliable at the time of test. Laser heads will be returned when service call is made early in March to install lasers. Heads require cleaning of crystals and cavity, although one crystal is pitted and will require resurfacing and coating soon.

552A #102

We are awaiting action on proposal to repair system.

552A #103

A trip was made early in February to answer continued intermittent scanning drive failures. Principal trouble area was contact failure of latching relay used to drive two multiple relays in the frequency determining circuits. Once these corrections were made, reliable operation returned.

552A #104

Continuing debugging of film drive has prevented anticipated completion of work in February. Nature of work has been to refine mechanical and electrical design for reliable operation in

areas of relay operation, in general, load sensor for power assist mode and drive creep. To arrange the circuit for the many drive functions, several types of multipole relays are used whose timing of operation was critical. Relay operation is now keyed to the slower element, the direction determining latching relay. The success of the power assist mode is bound up in reliable operation of drive load sensor, not only to be responsive to load changes, but also to provide reasonable "assistance" factor of load, both with reliable and precise operation.

A balance of these two directions is being developed. Most of the above effort has required relatively small changes to drive and continued work is expected to do the same. Because of above effort, final system touch up has not been done and is now expected to be completed in March.

Enclosure: Financial Report

WWB:maj

13 February 1967
552-552A-OD-319

PROGRESS REPORT - 552 and 552A

for January 1967

552 #101

Trip was made 26 January to prepare laser equipment for return shipment to factory and replace transistors in regulator circuits. Laser power supplies and heads will be modified and returned to customer early in February.

552A #102

During trip made 26 January, inspection of this system was made. The following was observed:

a) Left channel would move + and -X and -Y only. Joystick output OK and direction relays were OK. Found a circuit card in "Slo-Syn" translator faulty and when replaced, normal operation was seen.

b) Right channel barely move + or -Y axis.

Joystick output and direction relays OK. Time allotment ran out preventing further study of right channel.

An estimate to correct anticipated problems above, has been prepared and forwarded to customer.

552A #103

A trip was made January 19-20 to replace repaired joystick potentiometer. Joystick was refurbished together with repair of problems with left objective turret, right zoom magnifier, right dot reticle, widening scanning limits, reduction of film scratching with rear holddown and manufacture of more comfortable gear selector switch operator. At conclusion of the visit, equipment was to begin the two week trial period for acceptance.

552A #104

Image Alternator and Power Assist Film Drive are in-

stalled and operating with a few "bugs" remaining in the film drive circuitry. Problems plaguing scanning drive electronics have debugged to allow completion in early February. Principal difficulty was to discover cause for damaged joystick potentiometers. Induced transients from adjacent circuits appear to be the culprit and have now been effectively reduced for safe operation of scanning system.

With the favorable scanning drive situation completion in February is assured. Final timing on optics and other sub-systems can now proceed for completion.

Enclosure: Financial Report

WWB:lms